

MODEL E-316 HD
ALLEN

SYNCHROGRAPH



Overall Dimensions:
45" high, 36" wide, 23" deep.
Shipping weight, 265 lbs.

INSTRUCTIONS AND TRAINING

Personal instructions by a factory-trained representative are given to original purchaser of the Syncrograph. Return Mailing Card requesting instructional assistance insures prompt service. Also, complete and well illustrated instruction manuals are included with each unit shipped. Additional copies available at \$1.00 each.

Smooth and efficient high compression engine performance is greatly influenced by the condition of the distributor which times the vehicle ignition for various load and speed factors. The precision and dependability of this highly important operation can best be accurately checked with the Allen Syncrograph.

To insure maximum power, performance, and gasoline mileage, distributors must be restored to the vehicle manufacturer's specifications. Insure customer satisfaction, shop prestige and increased profits with the Allen Syncrograph which checks the following:

1. Cam angle and firing point of each cam lobe.
2. Centrifugal and vacuum advance characteristics.
3. Electrical and mechanical operating characteristics of breaker points.
4. Worn distributor housings and breaker plates.
5. Electrical leakage, series resistance, shorts, grounds, etc.
6. Misaligned shafts and worn bearings.
7. Vacuum chamber leakage.
8. Synchronization.
9. Transmission governors.

ALLEN METHOD OF DISTRIBUTOR TESTING

Breaker point spacing is recorded directly on a specially designed indirectly lighted meter calibrated in degrees of cam angle. A brilliantly edge-lighted plastic indicating arrow revolving within a 360° vernier adjusted protractor ring, stroboscopically plots the actual firing point of each cam lobe. The firing pattern of all makes and types of distributors is reproduced with 100% accuracy under actual operating conditions of varying speeds and vacuum.

Superiority of the Allen method of distributor testing is acknowledged by qualified automotive engineers.

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ELECTRIC and EQUIPMENT CO.
K A L A M A Z O O , M I C H I G A N

A PRECISION LABORATORY INSTRUMENT *for* COMPLETE DISTRIBUTOR TESTS

CABINET CONSTRUCTION AND APPEARANCE: Ultra modern styling with heavy chrome trim and extruded, anodized, satin finished, aluminum handles.

Welded steel construction with added reinforcing ribs for rigidity. Enclosed, ventilated battery compartment accessible from rear. Removable panel for periodic inspection and lubrication mechanism. Easy operating drawer on telescoping slides which permits full accessibility to drawer space. 4" swivel castors with locking brakes.

FINISH: Two tone, high lustre baked enamel over suitable primer.

ILLUMINATED FIRM NAME SIGN: Purchaser's firm name is engraved on edge-lighted lucite panel. Twenty-three letter spaces are provided. Use self-addressed return card included with Syncrograph to order after delivery. Number 7208 engraved lucite panel furnished no charge to original purchaser. Additional panels \$11.95 each.

TRICKLE CHARGER: Built in, maintains Syncrograph battery at full charge.

SPECIFICATION SCROLL: Illuminated scroll, indexed by vehicle make and year, lists complete specifications on all popular models. Over 3000 additional distributor specifications furnished in attractively bound manual.

WORK LIGHT: Small size, with universal clamp for mounting distributor housing. Illuminates distributor mechanism.

DISTRIBUTOR MOUNTING: Spring balanced, chrome plated column with hand wheel at top for controlling height, rigidly supports die-cast, self centering distributor

and vacuum unit mounting. Adapter bushings simulate actual engine mounting.

ADAPTERS: Complete set of adapters for all distributors and transmission governors. Improved adapter with quick change clamps, handles all Ford passenger car and truck distributors. Ford simplified timing procedure permits vacuum brake and timing adjustments with distributor rotating under actual operating conditions.

CHUCK: Quick acting, self centering, two jaw, with grease resistant composition inserts for flexibility. Anchored "retriever" chain locates chuck key in convenient position.

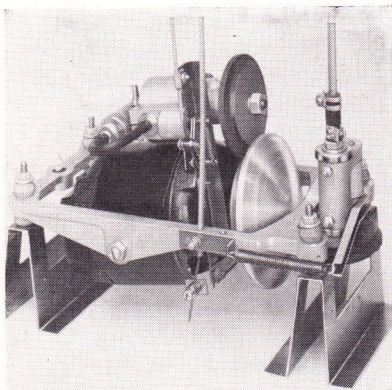
CONTROLS: Conveniently arranged on die-cast test panel. Includes Motor control, Speed control, Syncrograph On and Off control, Vacuum On and Off control, Vacuum Regulator and Vernier Protractor Ring control.

METERS: Indirectly lighted, shockproof, jewel bearings, D'Arsonval type with external zero adjustment, manufactured by Allen to precision standards of 1½% full scale accuracy. Genuine Alnico Five magnet provides maximum damping and high torque. Scale length 3⅞".

Cam Angle range 0 — 60°

Tachometer range 0 — 5000 Engine RPM

VACUUM GAUGE: 3⅞" diameter, aircraft type, diaphragm actuated movement. Pointer travel 600°. Range 0 to 25 inches, calibrated in tenths. External zero adjustment. Precision distributor adjustments in one-half tenth divisions can easily be measured.



VACUUM PUMP AND DRIVE ASSEMBLY

High volume, two cylinder, reciprocating vacuum pump operates from Syncrograph drive motor. Provides ample capacity for testing operation of all vehicle vacuum units such as distributor, speed governors, windshield wipers, vacuum boosters, vacuum horns, vacuum chokes, etc.

Powerful, constant torque, variable speed drive, 180 to 2500 RPM. Powered by reversible ¼ horsepower motor.

Drive spindle with universal coupling, supported on 4 oilite bearings for long service with minimum maintenance. Large lubricant reservoirs, filled through zerk fittings, provide proper lubrication for long periods. Entire drive unit assembled in heavy, ribbed, cast, rubber mounted frame.

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